FOOD MANAGEMENT AND CHILD CARE

PRACTICAL I & II

VOCATIONAL EDUCATION

HIGHER SECONDARY - FIRST YEAR

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Untouchability is a sin
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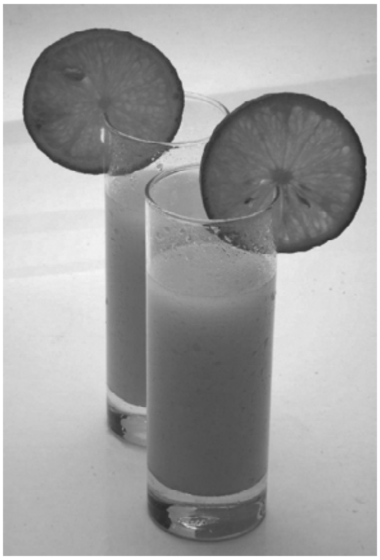
INSTRUCTIONS TO TEACHERS

- This guide book is prepared to help the teachers and students of Food Management and Child Care, Vocational group.
- Simple and standardized recipes are given as sample recipes. If you want to make any changes in the recipe according to your convenience, affordability and time limitations, you can do so.
- Be ready with the food ingredients and other requirements before hand.
- Students should be instructed to enter the lab with apron, hand towel, guide book and observation note.
- Ensure safety while cooking in the lab and handling equipment.

INSTRUCTIONS TO STUDENTS

- Cleanliness is essential in all aspects and all areas.
- Utensils and equipment should be absolutely clean
- Wash your hands before starting the work
- Examine the food carefully for any spoilage, stones or worms
- Wash the fruits and vegetables well
- Organise work so that there is no wastage of time and fuel
- Clean the cooking area after use
- Taste the food before serving the recipe
- Serve the recipe in appropriate containers at right temperature
- Wash and dry the dishes and keep in proper places
- Always wear an apron and bring hand towel without fail
- Always bring this guide book for practicals.
- Complete procedure has been given in guide book and you can follow the same for all exercises.
- Can use originality and novel ideas while preparing programmes, toys etc.



PRACTICAL - I

1. FOOD

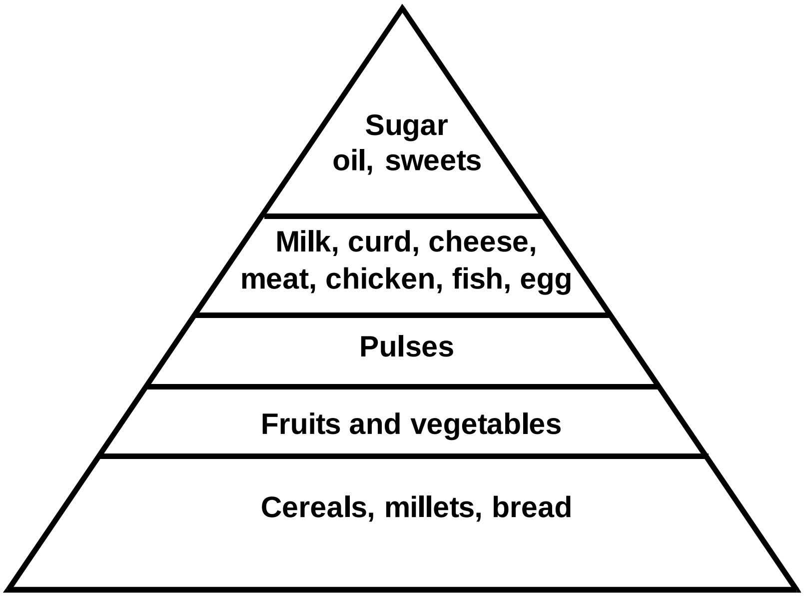
1.1: Food Pyramid - Preparation

Aim:

To know about food pyramid

Procedure :

Food pyramid is meant for use by the general healthy population as a guide for the types of foods and its proportion to be included in the daily diet.



Instructions:

Foods like poly unsaturated fatty acids, low fat milk, soya bean, sprouted grams, green leafy vegetables, seasonal fruits and millets can be emphasised.

1. Make a chart / thermocol model for a food pyramid
2. Make a food pyramid using real food stuffs.

Results and Discussion:

1.2: Basic Five Food Groups

Aim:

To know about Baisc Five Food Groups.

Importance of basic five food groups

Foods have been classified into different groups depending upon the nutritive value, for the convenience of planning meals.

BASIC FIVE (ICMR) FOOD GROUPS

S.No.	Food Groups	Nutrients
1.	**Cereals and products** Rice, wheat, ragi, maize, bajra, jowar, rice flakes, puffed rice, wheat flour, sprouted cereal	Energy, protein, invisible fat, thiamine, folic acid, riboflavin, iron and fibre
2.	**Pulses and Legumes** Bengal gram, black gram, cow pea, peas (dry), soyabean	Energy, protein, invisible fat, thiamine, riboflavin, folic acid, calcium, iron and fibre
3.	**Milk and Milk products / meat** i) Milk and skimmed milk, cheese, curd ii) Chicken, liver, fish, egg and meat	Protein, fat, riboflavin, calcium,
4.	**Fruits and vegetables** i) Mango, guava, tomato, papaya, orange, sweet lime, watermelon **ii) Green leafy vegetables:** Amaranth, spinach, drumstick leaves, coriander leaves, fenugreek leaves **iii) Other vegetables** Carrot, onion, brinjal, ladies finger, beans, capsicum, cauliflower, drumstick	Carotenoids, vitamin C, riboflavin, folic acid, iron, fibre Riboflavin, folic acid, calcium, fibre, iron, carotenoids Carotenoids, folic acid, calcium and fibre
5.	**Fats and Sugars** i) Fats : Butter, ghee, groundnut oil , coconut oil, hydrogenated fat, cooking oils ii) Sugar and jaggery	Energy, essential fatty acids and fat soluble vitamins Energy, iron (jaggery)

Instructions

1. Make a chart on Basic Five Food groups.
2. Display available food stuffs according to Basic Five Food groups.

Results and Discussion:

1.3: Preparation of meals using Basic Five Food groups

Aim: To plan and prepare a day's menu based on Basic Five Food group.

Equipment needed:

Pressure cooker, vessels, spatula, knife.

Meal time		Food items
Early morning	:	Milk
Breakfast	:	Pongal coconut chutney
Mid morning	:	Greens soup
Lunch	:	Vegetable pulao, onion pachadi, egg curry, papaya
Mid afternoon	:	Custard apple
Evening	:	Green gram sundal, biscuits, tea
Dinner	:	Chappathi, peas kuruma
Bed time	:	Milk, banana / apple

Recipe Formulation - Vegetable Pulao

Ingredients	Quantity
Basmathi rice	2 cups
Carrot	½ cup
Beans	¼ cup
Green peas	¼ cup
Cauliflower	¼ cup
Onion	2
Bread slices	to decorate
Pepper powder	1 tbsp.
Ghee	2 tbsp.
Spices	1 tsp.
Cashew nuts	2 tbsp.
Ginger garlic paste	½ tsp.
Spices	½ tsp.

Method:

1. Wash rice and fry in ghee
2. Fry sliced onion, ginger garlic paste in the pressure cooker
3. Add cut vegetables and fry in the pressure cooker
4. Add adequate water, fried rice, vegetable mixture, adequate salt and pressure cook it.
5. Decorate with fried cashew nut and bread slices and pepper powder.

Results and Discussion :

2. NUTRITION

2.1: Cereal Cookery (Carbohydrate rich foods)

Aim:

To formulate and prepare a recipe using cereals.

Equipment needed:

Pressure cooker, frying pan, spatula, spoon, cups.

Importance of cereals :

1. Cereals form the staple diet and contribute to most of the caloric requirement.
2. They are excellent sources of starch and B vitamins
3. Cereals also contribute to satiety and used to prepare the main dish
4. No meal can be made without cereal.
5. Cereals are used as thickening agent and coating agents.
6. Cereals are used in sweet preparations and fermented foods (idli, dosai)
7. Malted cereals are used in the preparation of nutritious beverages.
8. Cereal products are used as ready to use foods like rice flakes puffed rice.

Recipe Formulation - Dalia

Ingredients	Quantity
Broken wheat	100g
Green gram dhal	100g
Cumin seeds	5 g
Grated carrot	100g
Black pepper powder	2 g
Oil	15 ml
Salt	to taste
Cashew nut	10 g
Ghee	10 g

Method:

1. Fry green gram dhal till it turns golden brown
2. Heat oil and ghee in a pressure cooker
3. Fry cumin seeds and cashew nuts
4. Add broken wheat and green gram dhal and fry gently
5. Add grated carrot, black pepper powder, salt and water
6. Cook for 10 minutes.

Score card

Recipe	Appearance	Flavour	Colour	Texture	Taste

Results and Discussion:

2.2: Pulse Cookery (Protein rich foods)

Aim:

To formulate and prepare a recipe using pulses.

Equipment needed:

Vessels, mixie, dosai tava, spatula, spoon.

Importance of cereals :

1. Pulses are rich source of protein.
2. They are used as a thickening agent (eg.) Bengal gram flour
3. Germination of pulses improves the digestablity, palatability and nutritive value.
4. Soya bean is a very valuable pulse protein
5. Pulses have high protein and fibre content so they can be used in snacks and salads.

Recipe Formulation - Pesarattu

Ingredients	Quantity
Green gram	100g
Rice	20g
Onion (big)	1
Green chilly	2
Ginger	½" cube
Coriander leaves	few
Cumin seeds	½ tsp.
Coconut	15 g
Salt	taste
Oil	to fry

Method:

1. Soak green gram and rice for 3 hours and grind coarsely.
2. Add salt, cumin seed, ginger, green chilly, grated coconut, cut onion, coriander leaves to the batter.
3. Make dosas on a hot greased pan.

Results and Discussion:

2.3: Vegetable Cookery

Aim: To formulate a recipe using vegetables.

Equipment needed: Pan, cutting board, knife, serving vessels

Food sources: Carrot, green peas, cauliflower, ladies finger, potatoes, greens, pumpkin, snake gourd.

Importance of Vegetables:

1. Vegetables form an essential item of food both for rich and poor income groups.
2. Apart from their nutritive value vegetables probably do more than any other food groups to add appetising colour, texture and flavour to our daily diet.
3. They not only add variety to the diet but also provide vitamins and minerals.
4. Vegetables provide bulk and form the main source of dietary fibre.
5. Vegetables are very low in fat content

Recipe Formulation: Vegetable Soup

Ingredints	**Quantity**
Onion cubed	1 cup
Cauliflower	½ cup
Carrot	1/4 cup
Beans	1 cup
Cabbage	1/4 cup
Green peas	1/4 cup
Butter	5 gm
Corn flour	2 tbp
Milk	1 cup
Salt and pepper	to taste
Sliced roasted bread	to garnish

Method:

1. Cut all the vegetables into cubes except green peas.
2. Keep aside ½ cup of cut vegetables
3. Pressure cook and grind the cooked vegetables
4. Strain and separate the stock
5. Heat a pan and melt butter
6. Fry onion and ½ cup of cut vegetables
7. Add corn flour and milk mixture
8. Pour the vegetable stock and cook for few minutes
9. Serve hot with salt and pepper
10. Garnish with fried bread cubes

Results and Discussion:

2.4: Milk and Milk Products Cookery

Aim: To develop a recipe using milk and milk products

Equipment needed: Frying pan, kadai, spatula, serving utensils

Food Sources: Cream, khoa, butter, ghee, cheese, curd and milk powder

Importance of Milk and Milk Products:

1. It is good source of quality protein, calcium, phosphorus
2. Contains riboflavin, vitamin A, proportion to meet the dietary requirements of vulnerable groups (Infants, preschool children, pregnant and lactating women and aged)
3. It adds taste and flavour to the product
4. Milk products are used in various preparations as building and garnishing agents

Recipe Formulation : Cheese Paneer Pakoda

Ingredients	Quantity
Cheese	50g
Paneer	50g
Rice flour	1tbsp
Corn flour	2tbsp
Bengal gram flour	100g
Onion	1
Green chilly	3
Coriander leaves	few
Oil	to deep fry
Salt	To taste

Method:

1. Cut onion, green chilly and coriander leaves into small pieces
2. Mix all flours, paneer and cheese and prepare a mixture
3. Add cut onions and green chillies
4. Make into balls and deep fry

Results and Discussion:

3. MEAL PLANNING

3.1: Vitamin Rich Food Preparation

Aim: To formulate a recipe using vitamin rich foods

Equipment needed: Vessels, kadai, spatula, serving cup

Food sources: Vitamin A - carrot, papaya, milk

Vitamin B - Whole grains, yeast, meat, fish

Vitamin C - All citrus fruits (lime, orange, goose berry) coriander leaves, green chilli, sprouted legumes

Importance of vitamins

1. Vitamins are necessay for metabolic reactions in the body
2. Vitamin A is required for proper growth and normal vision
3. Vitamin B acts as a co-enzyme in carbohydrate metabolism and helps in the utilisation of glucose and synthesis of fat
4. Vitamin C is important for the formation of tissues and for quick wound healing.

Recipe formulation: Carrot Halwa

Ingredients	**Quantity**
Carrot	200g
Sugar	100g
Milk	500ml
Dalda or ghee	50g
Dried fruits and nuts	10g
Cardamom powder	A little

Method:

1. Wash carrots, scrape and grate
2. Add carrot to milk in a vessel and cook
3. When milk dries up add butter or dalda
4. Add sugar, fried nuts and crushed cardamom
5. Cook for some more time and remove from fire

Results and Discussion:

3.2: Mineral Rich Food Preparation (Calcium)

Aim: To formulate a recipe using calcium rich foods

Equipment needed: Kadai, vessals, spatula, serving dish

Food source: Milk, milk products, ragi, drumstick leaves, dried fruits

Importance of calcium

1. Building of bones and teeth and regulation of certain body processes
2. Essential for blood clotting
3. Essential for contraction of the heart and skeletal muscles
4. Regulates the permeability of the capillary muscle walls

Recipe Formulation : Ragi Pakoda

Ingredients	**Quantity**
Ragi flour	100g
Big onion	3
Bengal gram dhal (roasted)	15g
Green chilly	10g
Curry leaves	2g
Butter	10g
Salt	to taste
Oil	to fry

Method: 1. Mix ragi flour with other ingredients with little water and make into a dough

2. Heat oil in a frying pan and deep fat fry the pakodas.

Results and Discussion:

3.3: Mineral Rich Food Preparation (Iron)

Aim: To formulate a recipe using iron rich foods

Equipment: Vessels, cup, spatula, tray

Food Source: Dates, dry grapes, jaggery, drumstick leaves, ragi

Importance of Iron

1. Iron forms a part of the protein - haemoglobin which carries oxygen to different parts of the body
2. It acts as a co-factor for enzymes and other proteins
3. It is required for the formation of red blood cells

Recipe Formulation : Dry Fruits Laddu

Ingredients	Quantity
Dates	100g
Dry grapes	50g
Honey	20g
Coconut scrapping	1 cup
Cardamom	A pinch
Cashew and badam nuts	20g

Method:

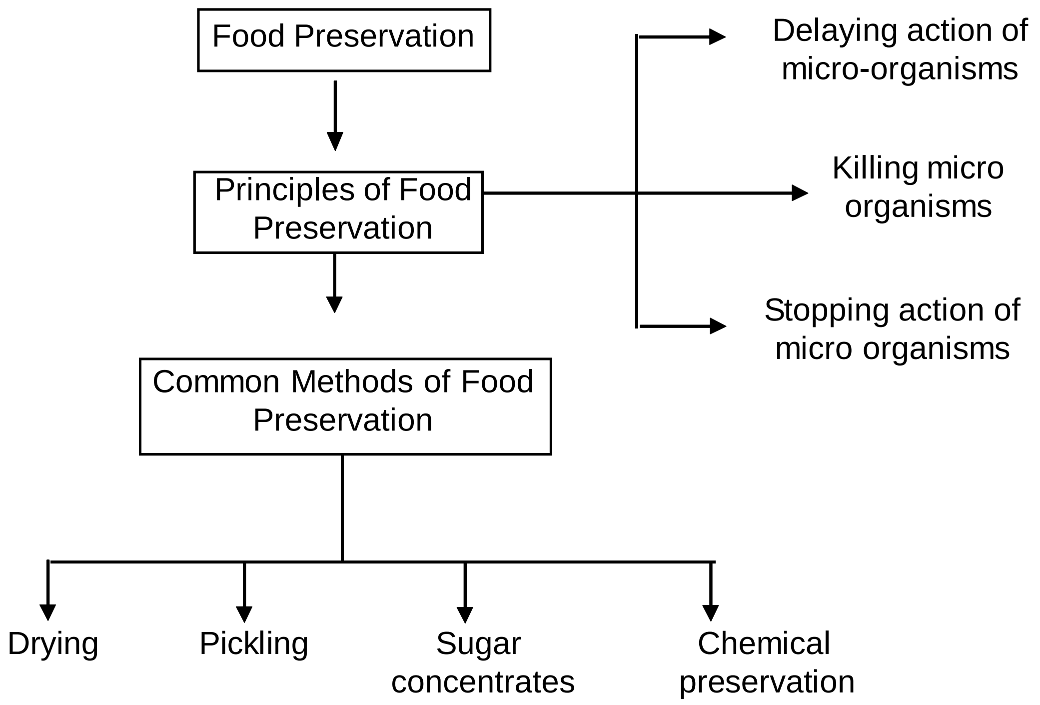
1. Cut dates and grind coarsely
2. Mix all the nuts with honey and cardamom powder
3. Make into balls and roll in grated coconut.

Results and Discussion:

4. FOOD PRESERVATION

4.1: Preparation of chart related to food preservation

The objective of food preservation is to prevent spoilage and extend the shelf life of foods.



Methods of preserving foods	Foods preserved (Examples)
1. Drying	Vathal, vadagam, dhal powder
2. Pickling	Lime, mango, onion
3. Sugar concentrate	Mixed fruit jam, jelly, fruit toffee
4. Chemical preservation	Mango squash, lime squash

Results and Discussion:

4.2: Tabulating microorganisms causing food spoilage

Aim : To tabulate microorganisms causing food spoilage in day today life.

Microorganisms Causing Food Spoilage and its Effect on Health

S.No.	Microorganisms	Mode of Transmission	Effect
I	**Bacteria**		
1.	Clostridium Botulinum	Canned foods such as peas, beans, meat, fish and other sea foods	Nausea, vomitting, diarrhoea, dry skin, even paralysis and death
2.	Staphylococcus bacteria	Cream filled baked goods, meat, poultry, gravies, sauces with cream and dairy products	Nausea, vomitting, diarrhoea, abdominal cramps, sweating
3.	Clostridium Perfringens	Poorly cooked meat, fish, poultry	Nausea, abdominal pain and diarrhoea
4.	Solmonella bacteria	Meat products, warmed up left overs, salads	Abdominal pain with fever, shivering, head ache
5.	Shigella	Poor hygiene of people handling food	Dysentry
6.	Streptococcal Infection	Contaminated drinking water, spoiled milk and milk products	Diarrhoea and other gastric disturbances
II	**Yeast**	Through air causing fermentation in foods	Acidity and gastric disorders
III	**Molds**	Through air and settling on moist foods like bread, fruits	Gastro intestional disturbances

Results and Discussion:

5. PRESERVATION OF FRUITS

5.1: Fruit Juice and Syrup Preparation

Aim : To formulate recipes for fruit juice and syrup preparation.

Equipment needed : Vessels, knives, measuring cups, bottles.

Importance of fruit preserve and syrup preparation

According to Fruit Products Order (FPO) Government of India (1955) fruit squashes should contain not less than 25 percent fruit juice and 40 percent solids. Squash contains added citric acid, sucrose and chemical preservatives like sodium benzoate or potassium metabisulphite.

In fruit juice preserves, juice and sugar ratio should be as follows:

- 25% fruit juice and 55% sugar in crush
- 25% fruit juice and 45% sugar in squash
- 25% fruit juice and 65% sugar in fruit syrup
- No juice and 65% sugar in synthetic syrup
- Clarified lime juice 1 litre, 250g sugar for cordial

General procedure for making squash

1. Extract the fruit juice and filter it. To extract juice from grapes, cook for 5-10 min. and pass through the strainer. To extract juice from pineapple, cut into four pieces (without removing skin) grate and squeeze the pulp using muslin cloth.
2. Make a syrup with sugar and water till thread stage.
3. Add citric acid to the syrup and remove from fire, when a white layer forms on the top. Citric acid not only clarifies the syrup but also activates the preservatives.
4. Cool the syrup and filter it
5. Mix with the juice extracted and add colour and essence
6. Add potassium metabisulphite or sodium benzoate
7. Mix and pour into sterilised bottles immediately leaving a head space

General Precautions : Precautions that should be followed during preparation of squashes and crushes:

1. Citrus juice should be extracted in a vessel in which small quantity of sugar is added to prevent development of bitterness.
2. The end point of the sugar syrup should be followed
3. Filter the sugar syrup and allow it to cool
4. While mixing the preservative add it to a little amount of juice and then mix it with the whole juice
5. Sterilise and dry the bottles thoroughly before filling

6. Don't fill up to the brim. Leave a head space at the top of the bottle to allow the reaction of potassium metabisulphite
7. Seal the bottle immediately to prevent loss of sulphurous acid
8. All the steps should be done very quickly without much time gap to prevent contamination
9. After mixing with potassium metabisulphite, the squash should not be used for 3 days
10. Potassium metabisulphite should not be added to dark coloured fruit juices such as grape crush as it may cause discoloration.

Orange Squash

Ingredients	**Quantity**
Orange juice	1 kg
Sugar	2 kg
Water	1 litre
Citric acid	35 g
Essence	a few drops
Potassium metabisulphite	3 g

Method

1. Peel the fruit, extract juice, strain and keep aside
2. Dissolve sugar in water, boil and add citric acid
3. Boil for a few minutes. Remove scum and strain
4. Cool and mix with the juice
5. Add preservative
6. Fill into bottles and seal
7. Store in a cool and dry place

Fruit Syrup / Synthetic syrup

General procedure

Ingredients	Extract	Fruit syrup	Synthetic syrup
Sugar	3/4 kg	3/4 kg	3/4 kg
Water	250 ml	200 ml	300 ml
Fruit juice	Fruit juice	100 ml	–
Citric acid	9 g	3 g	9 g
Rose water	75 ml	–	–
Permitted colour	as desired	as desired	as desired
Essence	3 drops	3 drops	6-8 drops

Method

1. Boil water and add sugar
2. Add citric acid to boiling sugar syrup
3. Give one or two boils. Remove scum and strain
4. Cool and mix with essence, fruit juice or extract
5. Fill into clean sterilized bottles and seal
6. Store in a cool and dry place.

Gooseberry Preserve

Fruit	-	1 kg
Sugar	-	1.5 kg
Citric acid	-	2 g

Method:

1. Prick fruit thoroughly (right upto the pit)
2. Submerge in water for 2-4 days - change water every 24 hours
3. Wash fruit well in water
4. Blanch in boiling water for 10-15 minutes
5. Spread the fruit in several layers of sugar and leave it for 24 hours
6. Next day remove the fruit. Boil the syrup and add citric acid
7. Remove scum and strain the syrup over the fruit. Leave for one day
8. Next day, cook the fruit till syrup acquires the consistency of honey
9. Cool and fill in jars

Results and Discussion:

5.2. Tomato Ketchup Preparation

Aim : To formulate a recipe of tomato ketchup preparation.

Equipments needed : Vessels, muslin cloth, knives, spatula, bottles

Principle : Preservation of fruit products by chemical preservatives sodium benzoate or sodium or potassium metabisulphites are used in the preservation of fruit products.

Ingredients	Quantity
Tomato	1 kg
Big onions	50 g
Garlic	50 g
Gloves, cinnamon, cardamom	5 g
Pepper	5 g
Chilli powder	5 - 10 g
Sugar	50 g
Salt	to taste
Vinegar	100 ml
Sodium benzoate	885 mg/kg of the finished product

Method

1. Take ripe red tomateos, wash and cut to remove green or bruised portions
2. Put in a thick bottomed vessel with little water and cook for about 10 minutes till the skin start curling
3. Remove from fire and remove the skin and put in the mixie and obtain the juice and strain it.
4. Cut onions and garlic into fine pieces. Powder the spices (cardamom, cloves, cinnamon) slightly. Place the onions, garlic, spices, chilli powder into a thin muslin cloth and tie it up into a firm bundle and drop it into juice
5. Add about 30g of sugar to the juice and cook till the volume reduces to less than half. Leave the spice bundle in the juice while it is cooking
6. Add the remaining sugar and salt. Cook further till the juice thickens to a sauce consistency
7. Add vinegar, remove from fire and take out the spice bundle. Mix the preservative and fill in dried air tight jars.

Results and Discussion:

6. BAKERY

6.1. Preparation of Yeast Solution

Aim : To prepare yeast solution

Equipment needed : Vessels, spoon.

Functions of yeast in bread making:

Yeast is a microscopic single celled plant belonging to the fungus order, which ordinarily multiplies by a process known as budding and which causes fermentation when placed under suitable conditions. Yeast causes fermentation producing carbon-di-oxide gas which raises the dough. This action is brought about by enzymatic action.

Ingredients	Quantity
Maida	25 g
Yeast (dry)	10 g
Sugar	20 g
Water	¼ cup

Method:

1. Take lukewarm water in a vessel, add sugar and mix
2. Add dried yeast and let soak until all the yeast starts floating and no grain is left at the bottom.
3. If compressed yeast is used, just crumble it in water and mix thoroughly
4. Add enough flour to make a thick batter
5. Beat the batter to incorporate some air and leave aside in a warm place for 15 to 20 mins
6. The quality of yeast can also be gauged by the speed with which a flying ferment rises
7. If there is not enough rise within a period of 15-20 min. the yeast is not suitable for use.

Result and Discussion:

6.2. Preparation of Cookies

Aim : To know the method of preparation of cookies

Equipment needed : Baking oven, basin, baking sheet, knife, rolling board and pin.

Uses of cookies : Cookies are often referred to as small sweet cakes. They come in between cakes and biscuits. Different types of cookies can be made easily within a short period of time.

Ingredients needed for preparing cookies

Flour, sugar, egg, butter, baking powder, water, milk, essence

Recipe Formulation - Ice Box Cookies

Ingredients	Quantity
Flour	100g
Sugar	40g
Butter	30g
Dalda	30g
Sodium bi carbonate	1g
Whole egg	16g
Milk powder	100g
Vanilla essence	1g
Salt	1g
Cherry	10g
Orange peel	5g

Procedure :

1. Sift the flour thrice with sodium-bi-carbonate, salt and milk powder
2. Blend both the fats and cream with sugar
3. Add slightly beaten egg and vanilla.
4. Add flour, cherry, orange peel (dried) and mix to form a homogeneous dough
5. Roll the dough into oblong shape and chill until stiff.
6. Cut with a sharp knife into slices of biscuit thickness and place on baking sheet.
7. Bake at 350^0F for about 12-15 minutes.

Result and Discussion:

6.3: Bread Butter Pudding

Aim : To prepare bread butter pudding

Equipment needed : Vessels, baking dish, spatula, casserole

Significance : It is a soft food item served to patients who are convalescing from surgery, gastro intestinal disturbances and fever. This type of food is easy to chew and contain less fibre.

Recipe Formulation - Bread butter pudding

Ingredients	Quantity
Milk	4 cups
Bread crumbs	2 cups
Egg (beaten)	2
Sugar	¼ cup
Salt	to taste
Vanilla essence	To flavour

Method

1. Heat milk until warm
2. Add sugar, salt and butter, stir with bread crumbs
3. Add the beaten egg and mix vanilla essence
4. Pour into a well greased casserole
5. Place a baking dish in a pan of warm water which reaches the level of pudding and bake
6. Pudding is done when silver knife inserted in the centre comes out clean.
7. Puddings can be topped with fruits, chopped nuts, bits of jelly or coconut scrappings.

Results and Discussion:

7. PRESCHOOL CHILDREN

7.1. Preparing Album Specifying the Importance of Infancy and Early Childhood

Aim : To prepare an album specifying the importance of infancy and early childhood.

Materials needed : Chart, pictures, scissors, colour pens

Importance of Infancy and Childhood : Infancy is a hazardous period both physically and psychologically. Physically it is hazardous because of the difficulties of making the radical adjustments to the totally new and different environment. Psychologically hazardous because it is the time when the attitudes of people towards the infant are established. Parents, educators, psychologists and sociologists regard this age as an age of rapid growth, troublesome age, toy age, pregang age, exploratory age, imitative age, creative age and questioning age.

Instruct the students to prepare a picture album showing the characteristics of infancy and early childhood as follows:

1. Different stages of growth (learning to eat, sit, walk, run, talk)
2. Toy age
3. Pregang age
4. Exploratory age
5. Imitative age
6. Creative age
7. Questioning age
8. Learning sex differences
9. Learning age
10. Emotions exhibited in different ways

Results and Discussion:

8. MANAGEMENT

8.1. Preparation of chart indicating functions of management

Aim : To prepare a chart indicating functions of Management

Materials needed : Charts, pictures, scissors, colours

Management is said to be a planned activity directed towards accomplishing desired ends. It involves the weighing of values and making of decisions.

Management = (Planning + Organization) + (Implementation + Controlling) + Evaluation

Everyone learns through experience to arrange in some manner the resources at his disposal. Management success is gained through accomplishment of mission and objectives. Success in management requires both effectiveness and efficiency in managing the situations.

Functions of Management

Management is indeed a complex process. Resources are limited, but the goals are many. Hence a constant struggle is needed to strike a healthy balance.

Four basics of good management

1. Planning
2. Organising
3. Controlling
4. Evaluating

1. Planning : Planning means mapping out the course of action. Planning in management enables the individual to find out ways of using resources to reach the desired goals. It guides action of various members towards goal achievement. Planning helps to identify the problem and obtain all relevant information, formulate possible courses of action and select the best course.

2. Organising : It involves the action to carry out the plan drawn up. It helps to establish proper relationship among the various activities planned, the people and the resources. Organising helps to use available resources more effectively. Plan needs to be implemented, that refers to putting the plan into action.

3. Controlling : In order to implement the plan successfully, a certain amount of control is essential. Controlling helps to be aware of shortcomings in the plan in comparison with the standards and fund available, alternatives with regard to goals set. A goal that is important today may not be so important tomorrow. Control helps to overcome problems and barriers, besides effective execution of the plan.

4. Evaluating : It is the most important process of management. Its purpose being to see what has been achieved as a result of effective planning and controlling. This forms as a guideline and basis for future planning.

The process of management should bring about greatest returns in satisfaction, growth and development, health and social usefulness to all members.

Note : Select a topic and prepare a chart including the above functions of management (eg) Birthday party / Children's day celebration.

8.2. Preparation of a model chart showing types of decision making

Aim : To prepare a model showing types of decision making.

Materials needed : Chart paper, scissors, colours, pictures

Decision making : It is a process of solving problems using available resources to achieve goals. The quality of the decisions determine the quality of management.

Decisions are based on the following five parts

1. Defining the problem
2. Seeking alternative solutions
3. Thinking through alternatives
4. Selecting an alternative
5. Accepting responsibility for the action

Basically there are six kinds of decisions

1. Routine or repetitive decision : They are often refered to as habits as they have become an established pattern of behaviour. The decision and course of action (eg) taking bed coffee, are combined to form a habit.

2. Conscious decision making : Though problems may occur day to day, careful consideration before a decision can be reached (eg) Deciding to buy a new car or get the old car repaired.

3. Immediate decision : These are in response to unprogrammed or emergency situation and hence the decision making is more complex (eg) Decision taken during situations when flood or an earthquake leaves families homeless. The decision not only concerns the family alone, but they have to take outside help to meet the necessary situations.

4. Decision occurring for the first time : Since it is occurring for the first time, the choice of course of action cannot be routine. It requires cooperation and initiative of all family members (eg) building own house.

5. Personal decision : This relate to personal problems, more common in the early stages of family life cycle. Head of the family who undertakes and makes personal decision. (eg) Selection of household equipment, dividing on the methods of saving.

6. Collective decision : This decision involves ideas of different members of the organisation. (eg) Decision of shares in an organisation etc.

Note: Identify the type of decision from a number of situations (eg) Starting of a Canteen / snack shop by a group of partners.

Results and Discussion:

Question Bank for XI Standard Practicals

Practical - I

Marks : 150

1. Draw a food pyramid and formulate a recipe using foods chosen from the pyramid.
2. Write the Basic Five Food groups. Formulate a day's menu and prepare any one food item.
3. Write the importance of cereals in cookery. Prepare a recipe and serve it.
4. Explain the importance of pulse cookery, formulate a recipe and prepare it.
5. Write the importance of vegetable cookery, formulate a recipe and prepare it.
6. Formulate a recipe using any milk product and write the importance of it.
7. Prepare vitamin A rich item and serve it.
8. Formulate a recipe using calcium rich food and prepare it.
9. Prepare a table related to food preservation.
10. Tabulate the microorganisms causing food spoilage.
11. Write the importance of fruit syrup and the general procedure for making fruit squash.
12. Prepare orange squash.
13. Write the recipe for tomato ketchup and prepare it.
14. Write the procedure for preparing yeast solution.
15. Write the recipe for any cookie preparation and prepare it.
16. Prepare a model chart showing decision making.
17. Prepare a chart on management steps.
18. Prepare bread butter pudding.
19. Prepare vitamin C rich food and write the importance.
20. Write the importance of iron and prepare a food item rich in iron.

BLUE PRINT

XI STANDARD (PRACTICAL EXAM)

Total Marks	**-**	**200**
A. Internal assessment	-	50
B. External assessment	-	150
A. Internal Assessment	**-**	**50**
Record + Album	-	15
Assignment	-	10
Project	-	10
Attendance	-	5
Tests	-	10
B. External Assessment	**-**	**150**
Procedure (write up)	-	75
Preparation	-	50
Presentation / display	-	25

PRACTICAL - II

1. FOOD

1.1: Meal Planning for Low Income Group

Aim: To formulate a day's menu for low income group.

Equipment needed: Vessels, serving bowls, pressure cooker, frying pan.

Importance of meal planning

Meal planning is both a science and an art. As a science it shows the way to include nutritious food in the diet. While art is involved in combining the needed nutritious foods into meals that are attractive, appetizing and satisfying in all ways. Following are some of the factors to be considered while planning a menu for the family.

1. Each meal should have atleast three of the five basic food groups.
2. Variety in appearance of food - that includes colour, texture, flavour, shape and satiety value of foods
3. Religious and social customs
4. Personal preference
5. Save time, energy, money and fuel

In general planning meals in advance helps to balance the required nutrition for all.

Procedure: Day's Menu (Low Income Group)

Meal time	Food Items
Early morning	Coffee / Tea
Breakfast	Idly, chutney
Mid morning	Greens soup
Lunch	Rice, drumstick sambar, cabbage poriyal, butter milk
Evening	Green gram sundal, tea
Dinner	Chappathi, vegetable kuruma.

Recipe formulation - Green gram sundal

Ingredients	Quantity
Green gram	150 g
Onion	1
Green chilly	3
Grated coconut	2 tbsp.
Salt	to taste

Curry leaves	Little
Oil	2 tsp
Mustard	¼ tsp.

Method

1. Soak green gram for 3 to 4 hours
2. Cook the soaked green gram
3. Cut onion and chilly finely
4. Heat oil, add mustard and cut onion, chilly and cooked sundal
5. Add grated coconut and serve hot.

Score card

Recipe	Appearance	Flavour	Colour	Texture	Taste

Results and Discussion:

1.2: Menu Planning for Middle Income Group

Aim: To formulate a day's menu for middle income group

Equipment needed : Frying pan, basin, spatula, serving plate

Importance of meal planning

As per previous exercise

A Day's Menu (Middle Income)

Meal time	Food Items
Early morning	Milk
Breakfast	Adai with chutney
Mid morning	Apple juice
Lunch	Rice, more kulambu, egg omlette, carrot salad, curd
Evening	Banana fritters
Dinner	Puri with vegetable kuruma
Bed time	Milk

Recipe Formulation - Banana Fritters

Ingredients	Quantity
Banana ripe	2
Maida	100g
Powdered sugar	100g
Cardamom	2
Oil	½ lit.

Method:

1. Smash the banana and keep it aside
2. Add maida, powdered sugar, cardamom and mix into a batter
3. Heat oil and pour spoonful of the batter
4. Deep fat fry, till it turns into golden brown.

Score card

Recipe	Appearance	Flavour	Colour	Texture	Taste

Results and Discussion:

2. NUTRITION

2.1: Methods of Measuring

Aim: To know the different methods of measuring ingredients.

Equipment needed : Weighing balance, spoon, knives, plates, measuring cups.

A. Procedure

I. Methods of measuring ingredients

a. Heaping

1. Fill the measuring cup with dry ingredients
2. Do not tap or shake the cup
3. After heaping take the weight of the cup with ingredient

b. Levelling

1. Measure the ingredient as in (a) but the sides are levelled off with the help of the edge of a knife.
2. In case of flour repeat the above method after sifting the flour.

c. Tapping

1. Measure the ingredients as in 'a'
2. But tap the cup after each addition and level with the sharp edge of the knife.

II. Method of measuring fat

a. Loose packing

1. Press the fat into a measuring cup till it is upto the mark.
2. Take the weight.
3. Repeat for three times and calculate the mean value.

b. Firm packing

1. Pack the fat firmly into the measuring cup and level with the sharp edge of the knife.
2. Take the weight
3. Repeat for three times and calculate the mean value

III. To measure powdery food in small quantities

1. Sift the powder and fill into a cup using a dry spoon and level with the sharp edge of the knife.
2. Repeat the process to get three values
3. Calculate the mean weight

B. Give the capacity of the following:

1. One cup =
2. One teaspoon =
3. One tablespoon =

Results and Discussion:

2.2: Methods of Cooking

Aim: To formulate and prepare recipes using the following methods of cooking in order to understand the procedure.

Equipment needed : Pressure pan, sauce pan, kadai, spatula, vessels.

Importance of cooking

Food preparation is an important step in meeting the nutritional needs of the family. The process of subjecting food to the action of heat is termed as cooking. Heat is transferred to the food by conduction, convection, radiation or microwave energy.

Cooking takes place by moist and dry heat methods. Moist heat involves water and steam. Air or fat are used in dry heat methods.

Procedure

A. Boiling

1. Take 50g of parboiled rice and soak for half an hour.
2. Boil 500 ml of water and add the soaked rice. Cook till the rice is soft.
3. Repeat the cooking with 50g of greengram dhal

B. Pressure Cooking

1. Take 50g parboiled rice and soak for half an hour.
2. Add 300 ml of water and pressure cook
3. Repeat the cooking with 50g of green gram dhal.
4. Compare the time taken for pressure cooking and boiling method

C. Frying

I. Shallow fat frying - Chappathi

1. Take 100g of wheat flour. Add water and salt and prepare a dough. Roll into chappathi
2. Place the rolled chappathis on a heated dosa pan and shallow fry.

II. Deep fat frying - Poori

1. Take 100g of wheat flour. Add water and salt and prepare a dough. Roll into pooris.
2. Deep fat fry.

D. Roasting - Groundnut

1. Take 50g of groundnuts and clean
2. Roast in a heated frying pan

E. Poaching - Egg

1. Boil water in a vessel
2. Break an egg in the centre, pour the contents into the boiling water. Cook for three minutes and remove from water.

F. Stewing - Apple

1. Take an apple and simmer in a pan with a tight fitting lid using small quantities of water to cover only half the fruit.
2. Allow the liquid to first boil and then simmer for 5 minutes.

1. Type of cooking of different ingredients.

S.No.	Ingredients	Method of Cooking
1.	Rice	Pressure cooking
2.	Green gram dhal	Pressure cooking
3.	Vegetables	Steaming
4.	Apple	Stewing
5.	Tomatoes	Blanching

II. Give recipes using the following cooking methods:

1. Steaming Eg.: Idli, Idiayppam
2. Pressure cooking Eg.: Pulao, vegetable kuruma
3. Frying Eg.: French fries, bonda
4. Roasting Eg.: Aval, popcorn
5. Boiling Eg.: Kichadi, porridge, Payasam

III. Using the following ingredients formulate recipe with suitable cooking methods

S.No.	Ingredients	Recipe	Cooking method
1.	Semolina and vegetable	Kichadi	Boiling
2.	Rice and dhal	Pongal	Pressure cooking
3.	Ragiflour and jaggery	Porridge	Boiling
4.	Wheatflour and greens	Stuffed chappathi	Shallow fat frying
5.	Milk and egg	Pudding	Steaming

Results and Discussion:

3. THERAPEUTIC DIETS

3.1: Clear Liquid Diet and Full Liquid Diet

Aim : To formulate a clear liquid diet to be prescribed for patients in the post-operative stage.

Equipment needed : Sauce pan, spatula, spoon, cup.

Significance of therapeutic diets :

Therapeutic diets are normally prescribed by the doctor attending the patient in the hospital. Diet therapy is the use of food in the treatment of a disease. This is accomplished by changing the patients normal diet in order to meet the altered requirements resulting from disease or injury.

Procedure : Sample Menu for Clear Liquid Diet

Meal Time	Food Items (1 glass at a time)
Morning	Tea without milk
Breakfast	Coffee without milk
Mid morning	Tender coconut water
Lunch	Clear vegetable soup / ragi kanji
Mid afternoon	Ginger ale
Evening	Fruit juice
Dinner	Clear vegetable soup / sago kanji
Bed time	Protinules

Recipe formulation : Ragi Kanji

Ingredients	Quantity
Ragi flour	5 g
Milk	100 ml
Salt	a pinch

Method:

1. Dissolve ragi flour in water
2. Boil for 5 minutes
3. Add salt and milk and serve hot.

Full liquid diet - It is used for patients who are acutely ill and are unable to chew or swallow solid food. This diet includes liquid foods containing solids which are easy to digest.

Procedure : Sample Menu for Full Liquid Diet

Meal time	Food items
Morning	1 cup of milk
Breakfast	1 glass egg-nog
Mid morning	1 glass fruit juice
Lunch	1 cup strained vegetable soup
Mid afternoon	1 cup ice cream
Evening	1 cup tea
Dinner	1 cup strained vegetable soup with butter / 1 cup rice kheer
Bed time	1 glass milk with protinules

Recipe formulation - Vegetable Soup

Ingredients	Quantity
Carrot	25g
Beans	25g
Onion	25g
Tomato	5g
Water	50ml
Salt and pepper	to taste

Method

1. Cut the given vegetables into cubes
2. Boil the cut vegetables in the given amount of water
3. Allow it to cool for sometime
4. Grind the cooked vegetables with some cooked water, strain the mixture and add the remaining water.
5. Add salt and pepper and serve

Results and Discussion:

3.2: Soft Diet

Aim : To formulate a soft diet

Equipment needed : Frying pan, chappathi board, rolling pin, spatula, serving utensils

Significance of soft diet : This diet is intermediate between a liquid diet and a normal diet. It is served to patients who are convalescing from surgery, gastro-intestinal disturbances and acute infections. The food should be soft in texture, easy to chew and contain no harsh fibre and without strong flavour.

Procedure : Sample Menu for Soft Diet

Meal time	Food items
Morning	Tea 1 cup
Breakfast	2 slices of bread with butter, 1 soft cooked egg
Mid morning	1 banana (small)
Lunch	4 phulkas / 2 chappathis
	1 cup mung dal with ghee
	½ cup rice
Evening	1 cup tea, 2 biscuits
Dinner	2 chappathis
	1 cup potato and palak curry
	½ cup rice
	1 cup curd
Bed time	1 cup milk

Recipe Formulation : Bread with Butter

Ingredients	Quantity
Bread slices	2
Butter	5g

Method :

1. Slightly toast the bread slices on a hot pan
2. Smear butter on the bread slices and serve

Results and Discussion:

4. FOOD PRESERVATION

4.1: Drying

Aim : To formulate recipes for the preparation of Onion Vadagam and Sundaikai Vathal

Equipment needed : Drying trays, knives and plastic sheets.

Importance of sundrying

Sun dried foods are preserved because the available moisture level is so low that the microorganism cannot grow and enzyme activity is controlled. Selection of vegetables, washing, peeling, cutting and blanching are the essential steps in drying process.

Recipe Formulation - Onion Vadagam

Ingredients	Quantity	Ingredients	Quantity
Small onions	1 kg	Asafoetida	3g
Green chillies	40g	Garlic	10g
Cumin seeds	5g	Curry leaves	10g
Black gram dhal	65g	Salt	to taste
Mustard	5g		

Method

1. Remove the skin of the onions and chop or crush the onions
2. Soak black gram dhal in water till it becomes soft
3. Grind blackgram dhal, green chillies, garlic, cumin seeds and curry leaves
4. Roast the mustard with little oil and add it to the ground dhal paste
5. Add crushed onions, asafoetida and little salt
6. Mix all the ingredients together into a thick consistency
7. Take small balls and place over plastic sheet and allow it to dry in hot sun.
8. When it is fully dried, remove from the sheet and store it in an airtight cotainer.

Recipe Formulation : Sundaikkai Vathal

Ingredients	Quantity
Sundaikkai	½ kg
Curd	½ lit
Salt	as needed

Method

1. Crush big sundaikkai into halves
2. Soak in water to reduce the bitterness
3. Repeat the same procedure for three days, changing water in between
4. Remove from water and soak sundaikkai in curd for three days
5. Stir once or two times, add salt
6. Dry in sunlight and again soak in buttermilk
7. Repeat this process for three days and dry it finally in hot sun.

4.2: Dry Powder

Aim : To formulate recipes for dry powder (Preparation of Paruppu powder and curry leaves powder)

Equipment needed : Frying pan, mixie, spatula

Importance of dry powders : Dried foods are more easily transported because of their weight reduction while drying. Many Indian foods are preserved by sundrying. Curry powders, vathal and vadagam are sun dried.

Recipe Formulation : Paruppu Podi

Ingredients	Quantity
Bengal gram dhal	½ cup
Black gram dhal	½ cup
Red chilli	6
Asafoetida	½ tsp.
Curry leaves	Little
Oil	2 tsp.

Method

1. Heat the pan and pour oil and fry bengal gram dhal and black gram dhal
2. Add red chilli and curry leaves and asafoetida powder to the same and heat gently
3. Allow it to cool for sometime and then grind it in a mixie coarsely.

Recipe Formulation - Curry Leaves Powder

Ingredients	Quantity
Curry leaves	1 cup
Black gram dhal	½ cup
Red chilli	10
Salt	to taste
Oil	2 tsp.

Method

1. Take curry leaves and dry it under shade
2. Heat the pan, add oil and fry blackgram dhal and red chilli
3. Add curry leaves and then fry the same and add salt
4. Cool it and then grind it coarsely.

Results and Discussion:

5. SALTING AND PICKLING

5.1: Preparation of tomato and lime pickles

Aim : To formulate recipes for the preparation of tomato and lime pickles.

Equipment : Sauce pan, jars, weighing scale, measuring cups, vessels.

Importance : The process of preservation of food in common salt or in vinegar is called pickling. Spices and edible oil also may be added to the product. Pickles are good appetizers and add to the palatability of meal. Pickles aid digestion by stimulating the flow of gastric juice. Different kinds of pickles are made in several Indian homes. Some of the Indian pickles are mango, lime, turnip, cabbage, tomato, cauliflower, etc.

Recipe formulation : Tomato Pickle

Ingredients	Quantity	Ingredients	Quantity
Tomato	1 kg	Asafoetida powder	10g
Garlic	50g	Fenugreek	10g
Chillies	20g	Turmeric powder	Little
Pepper	10g	Tamarind	20g
Mustard	10g	Gingelly oil	250ml
Salt	Required amount		

Method

1. Clean tomatoes and blanch them in little quantity of water and put them in the mixie and grind them into smooth paste.
2. Roast dry chillies, asafoetida, fenugreek seeds and ¾th quantity of mustard and powder them individually.
3. Powder pepper and keep aside
4. Soak tamarind in little quantity of water and remove the unwanted portions and take the clean pulp.
5. Keep frying pan over the fire, add the gingelly oil and the remaining portion of mustard seeds, when it start splittering, add the clean garlic and fry.
6. Add the tamarind pulp and when it starts boiling add the ground tomato paste.
7. Add turmeric powder, chilli powder, pepper powder, powdered spices and salt one by one and mix them well.
8. Remove from the fire and store in sterilized bottles.

Recipe formulation : Lime Pickle

Ingredients	Quantity	Ingredients	Quantity
Lime	1 kg	Cloves	2 g
Cumin seeds	2g	Ginger	25 g
Green chillies	25g	Salt	100g
Black pepper	2 g	Fenugreek	2 g

Method

1. Wash lemon and dry with a clean towel
2. Cut into pieces on a clean board
3. Extract 250g of lime juice. Cut the remaining into pieces of desired size
4. Add salt and leave it in sun for one week
5. Grind together the other ingredients and add to lime
6. Place in a dry sterilized container.
7. Keep in sun for a few more days till ready for consumption
8. Cover with salt and oil
9. Close with a tight-fitting lid and store.

Score Card

Recipe	Appearance	Flavour	Colour	Texture	Taste

Results and Discussion:

6. CONFECTIONARY

6.1: Stages of Sugar Cookery

Aim : To study the different stages of sugar cookery.

Equipment needed : Saucepan, spatula, vessles

Importance of sugar cookery

1. Sugar is used extensively in the preparation of processed fluid products, flavoured syrups, sweet preparations and confectionaries
2. Measuring the temperature of the sugar solution helps in estimating the concentration of sugar in the mixture
3. Final concentration of the sugar determines the consistency of the end product
4. More concentrated the sugar solution, the firmer the consistency of the finished product

Procedure

a. Dissolve 200g of sugar in a cup of water
b. Boil the solution, note the rise in the temperature with constant boiling
c. Find out the corresponding temperature at different stages using cold water test.

1. Thread stage :

Syrup spins to a two inch thread, when it is allowed to drop from a spoon (110-112^{0}C).

2. Soft ball stage :

Syrup spins to a two inch thread, when it is allowed to drop from a spoon (110-115^{0}C).

3. Firm ball stage :

Syrup when dropped into cold water, forms a ball that does not flatten on removal from water (118-120^{0}C).

4. Hard ball stage :

Syrup when dropped into cold water, forms a ball that is hard enough to hold its shape (121-130^{0}C).

5. Soft crack stage :

Syrup when dropped into cold water, forms into threads that are hard but not brittle (132-143^{0}C).

6. Hard crack stage : Syrup when dropped into cold water, forms into threads that are hard and brittle (149-154^{0}C).

7. Clear liquid stage : Syrup melts and forms a clear liquid (160^{0}C).

8. Brown liquid stage : Syrup becomes brown and finally caramalised (170^{0}C).

Stages of Sugar Cookery

Product	Temperature (^0C)	Doneness	Description of test
Syrup (Gulab jamoon, jelabi)	110-112	Thread	Syrup spins to a 2 inch thread between thumb and first finger
Burfi, Fondant, Fudge	112-115	Soft ball	Syrup when dropped into cold water form a ball that flattens on removal from water
Boondi, Laddoo	118-120	Firm ball	Syrup when dropped into cold water, forms a ball that does not flatten on removal from water
Divinity marshmallows	121-130	Hard ball	Syrup when dropped into cold water, forms a ball that is hard enough to hold its shape
Butter scotch toffee	132-143	Soft crack	Syrup when dropped into cold water forms threads that are hard but not brittle
Brittle glace	149-154	Hard crack	Syrup when dropped into cold water forms threads that are hard and brittle
Barley sugar	160	Clear liquid	Sugar liquifies
Caramel (Peanut brittle)	170	Brown liquid	Liquid becomes brown

Results and Discussion:

6.2: Preparation of Chocolates and Groundnut Toffee

Aim : To formulate recipes to prepare a chocolate and groundnut toffee.

Equipment needed : Sauce pan, measuring cups, vessels

Importance of Chocolate Confectionary

1. Chocolate is a highly nutritive and widely appreciated confectionary
2. In making chocolates the ingredients like chocolate or cocoa powder butter, sugar and milk solids in the case of milk chocolates are used.

Recipe Formulation : Milk Chocolate

Ingredients	Quantity
Condensed milk	250 g
Sugar	100 g
Milk	500 ml
Butter	50 g
Cocoa powder	20 g

Method

1. Pour condensed milk into a thick bottomed sauce pan
2. Mix sugar and cocoa powder in milk without lumps
3. Pour this mixture into condensed milk
4. Heat the mixture adding butter. Stir continuously until the desired consistency is reached
5. Transfer this mixture into a greased plate and cool it.
6. Cut toffee pieces

Recipe formulation : Groundnut Toffee

Ingredients	Quantity
Groundnuts (dehusked)	35 g
Jaggery	75 g
Water	50 ml

Method

1. Dissolve jaggery in water and strain
2. Boil the mixture until the hard ball stage (121^0-130^0C) is reached
3. Add groundnuts and stir until it is done
4. Transfer the mixture into a greased pan and cut it after it is slightly cooled

Results and Discussion:

7. PRESCHOOL CHILDREN

7.1: Creative Activity - Drawing and Painting

Aim : To teach the importance of creative work among children and to learn about basic drawing and painting (using pencil, crayons and water colours)

Things : Charts, crayons, pencils, eraser, colour pencils, water colour.

Significance of Creative Activity

Creative activity is not a passive activity, but it encompasses all of the senses, coupled with the physical activity of exploring through the use of colour, form and space. Creativity has an important role to play in children's education. Some of them are as follows:

1. Creative activity helps children to express and expand their aesthetic awareness of the physical world and the world of art, enabling them to appreciate and work for beauty.
2. A good creative art program helps children to understand concepts related to things like colour mixing, concept of colour and concept of shape.
3. Creative art activity serves as a good foundation for reading as well as writing programs
4. Children develop co-ordination of small and large muscles control while using pencils and paints.

Procedure forTeaching Preschool Children

1. Make the children draw on an easal board or paper with paints, pencils or chalks.
2. They can draw / paint while listening to music
3. Bright colours of paints can be given, in order to know the differences in colour, shape and size
4. Children should be advised not to pick up the paintings while they are still wet, otherwise all the colours will get mixed.

Instruction to the Students

Make students to preapre an album on different types of basic drawing and painting.

1. Pencil drawing
2. Colour pencil drawing
3. Crayon drawing
4. Water colour painting
5. Sketch painting
6. Using glitter pens

Results and Discussion:

7.2: Preparation of Low Cost Equipment

Aim : To learn the method of preparation of low cost equipment for preschool children.

Materials needed : Discarded tins, plastic wire, metal lids, wooden plate, coconut shells, glue, strings, plywood.

Need and Importance of Low Cost Equipment

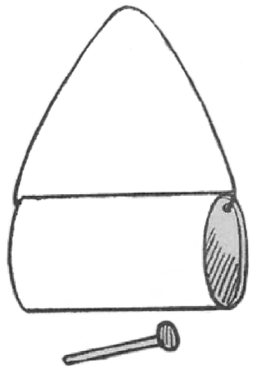
Play equipment and materials for children need not be too expensive and elaborate as very few preschools can afford to have expensive equipment and materials.

1. In order to fulfill the true purpose of education, it is necessary not only to use the materials and resources available in the total environment, but also to satisfy the child's hunger for knowledge.
2. The utilization of indigenous materials that are available in abundance and without much cost especially in the rural areas will facilitate the advancement of preschool education.
3. Specific values of low cost equipment are highly inexpensive, easy to handle, multipurpose, safe, promotes self-learning, durable, flexible and variety.

Procedure for preparing some low cost equipment

I. Musical Instruments

a) Drum

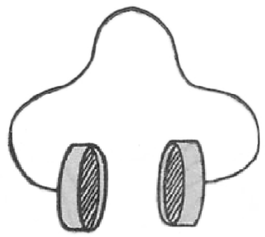


(i) Take a big cerelac or farex empty tin

(ii) Insert a plastic wire into the tin by making holes on either sides. This makes a worthy drum.

(iii) Use 2 sticks to beat the drum

b) Tambourine



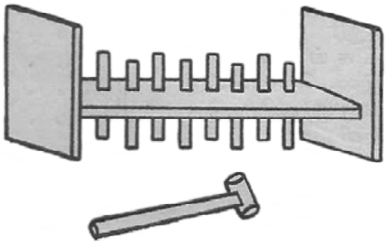
(i) Two metal lids are taken and connected with a plastic wire of 30 cm length

(ii) Holes are made at four places in each lid and few single bells are loosely attached to the holes

(iii) The striking of the two lids produce a resilient sound.

II. Indoor Play Equipment

a) Peg Board :



(i) The pegboard consist of a base board supported by two stands each of 17.5cm x 5 cm x 1.25cm.

(ii) The base board has eight holes, four in two rows into which wooden pegs would be inserted by means of hammer.

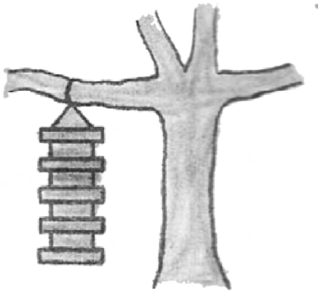
b) Bamboo Blocks

(i) A bamboo that has a large hole in the centre is cut into small pieces (5cm width) to be used by the children as blocks.

(ii) Well polished coconut shells of assorted sizes could also be used as blocks.

III. Outdoor Play Equipment

a) Rope Ladder



(i) Wooden planks of 30cm thickness and 37.5cm length are taken

(ii) Strong ropes are inserted on both sides

(iii) A sturdy knot is made under each of the wooden planks throughout the ladder

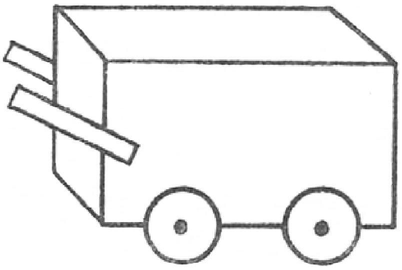
(iv) The length of the ladder will vary depending upon the branch of a tree in which it would be attached.

b) Trolly

(i) Trolly is made up of plywood

(ii) It is just like a box of 50 cm x 30 cm x 45 cm and two handles of 15cm x 15cm are attached on the sides

(iii) Four wheels can be fitted in order to push it.



Instruction : Apart from the low cost equipment given above, students can make their own equipment based on their novel ideas.

Results and Discussion:

7.3: Preparation of Stuffed Toys

Aim : To learn the preparation of stuffed toys

Materials needed : Wool, cloth, felt paper, feathers, hay, needle, thread, stuffing materials

Importance of Stuffed Toys : "My friends" are realistic playmates designed to encourage identification and positive self concept. These toys help children recognize and express their emotions.

Stuffed toys are an excellent tool for use in story telling, rhyme sessions, dramatisation and in language activities. These dolls/toys are also functional to promote social and emotional aspects of life.

Stuffed toys could be prepared with waste wool, papers, felt cloth waste, hay, feathers etc. depending upon their availability. Use of accessories such as old shoes, belts, laces, ribbons, beads, bangles, ties, garments and synthetic flowers add charm to the dolls that one wishes to prepare.

Procedure for the preparation of stuffed toys

1. Socks Doll

Materials needed : Socks, rags, thread, felt paper

Method

(i) Take an old socks and stuff one end of it with rags and tie at the neck to form the head and body.

(ii) Leave the other end loose and twist to form the tail

(iii) Attach ears and decorate the face

2. Rug Ball

Materials needed : Old white clothes, sponge pieces, thread and needle, sketch pens (red and black).

Method

(i) Cut two pieces of the cloth into round shape

(ii) Stitch the edge by back stitch

(iii) Leave a little space at one end. Pull the cloth inside out

(iv) Fill it with the sponge pieces till it is almost round in shape

(v) Then hem the remaining part

(vi) Draw the eyes and mouth using the sketch pen as in figure

3. Parrot

Materials needed : Green cloth (any material), needle, thread, red paper, other coloured paper, cotton.

Method

(i) Cut two pieces of cloth for main body of the parrot

(ii) Stitch them all round, leaving one inch gap for stuffing

(iii) Turn it over and stuff the parrot with cotton strip, wood, wool or sawdust.

(iv) Close the opening by means of hem stitches

(v) The main body of the parrot can be made of green-coloured long cloth or poplin. The beak can be pasted with paper.

(vi) A decorative design can be cut from coloured paper and attached as a wing.

Instructions : The stuffed toys preparation given above can be modified according to the student's imagination.

Results and Discussion:

8. MANAGEMENT

8.1: Managerial Activities and Steps in Organising Cultural Programmes for Preschool Children

Aim : To organise a cultural programme for preschool children using the following managerial steps.

Significance of management in preschool programme

1. Management is necessary to create an effective use of resources in achieving preschool and efficient group co-operation.
2. Management requires effective and efficient group co-operation.
3. It involves decision-making that leads to action. It is a process of solving problems and using resources to achieve goals.

Procedure

Note : An example is given below to organise a cultural programme in a preschool. Students can be encouraged to organise a plan by their own ideas.

Theme : Organising cultural programme for celebrating "Pongal" festival.

I. Planning : Planning is mapping out the course of action. The following points should be borne in mind while planning.

1. Goals and objectives to be set for the programme
2. Number of programmes to be performed (eg) dance, drama, other activities
3. Number of participants
4. Money to be spent on dresses, accessories, etc.
5. Inviting guests for the function
6. Arrangement of the venue
7. Allotment of duties
8. Invitation to the parents

II. Controlling

Controlling is carrying out the plan. The different phases of controlling are:

1. Energising : This is initiating and sustaining the action (eg) Encouraging children and others to do the activities effectively.

2. Checking : This is a quick step by step evaluation of the progress of a plan. (eg) Checking in between audio and lighting arrangements as well as the readiness of the children. Keep a cross-check on the arrangement of tea and snacks.

3. Adjusting : Adjusting is done in the plan if there is a need for fresh decisions to be taken. This should be done taking into account the problem in hand and the resources available. (eg) In case of the absence of the child participant, alteration done in the programme.

III. Evaluating

The success or the failure of the plan must be evaluated on the basis of set goals. Evaluation can be general or detailed. In case of of failure, the demerits of the plan may be noted and rectified while making further plans. (eg) whether the function ended successfully as per scheduled time? Whether the objectives and goals are achieved? Responses from the audience for further improvement. Was the programme done within the allotted funds?.

Results and Discussion:

Question Bank for XI Standard Practicals

Practical - II

Marks : 150

1. Plan a day's menu for low income group. Prepare any one food item and display it.
2. Plan a day's menu for middle income group. Cook any one food item and serve it.
3. Find out the weight of the given ingredients using different methods of measuring.
4. Prepare a food item using any one of the following cooking methods.

   a) frying b) stewing c) roasting
5. Formulate a recipe for a clear liquid and full liquid diets. Prepare any one full liquid food and serve.
6. Prepare a soft diet.
7. Write the recipe for the preparation of onion vadagam.
8. Write the recipe for making paruppu powder.
9. Write the procedure for preparing tomato / lime pickles.
10. Write the stages of sugar cookery.
11. Explain chocolate preparation.
12. Prepare a groundnut toffee and serve.
13. Write the procedure for preparing any two low cost toys.
14. Prepare a stuffed toy using the given material.
15. Organize a cultural programme for preschool children.

PROJECT TOPICS

I. Assessment of Nutritional Status of Preschool Children

Nutritional Status
- Normal
- Malnourished
  - Under nourished
  - Over nourished

Normal nutritional status
- Balanced Food Intake
- Normal utilisation of nutrients

Assessment of Nutritional Status

Anthropometric	**Biochemical test on tissues**	**Clinical Examination**	**Dietary Survey**
Height	Blood	Signs and symptoms of nutritional deficiency diseases	24 hour recall
Weight	Urine		Weighment
Circumferences	Stool		Food frequency
Mid upper arm			Diet history
Head			
Chest			

Malnutrition causes

1. Overnutrition
2. Undernutrition

Types
- Overnutrition (over eating)
- Undernutrition (low food intake, poor hygienic conditions, infections)

Assessment of nutritional status of children - Pre school (Measuring height and weight)

Reference values:

Years	Male		Female	
	Height (cm)	Weight (kg)	Height (cm)	Weight (kg)
1+	80.07	10.54	78.09	9.98
2+	90.01	12.51	87.90	11.67
3+	98.40	14.80	96.20	13.79
4+	104.70	16.10	104.20	15.90
5+	113.50	19.30	112.20	18.70

ICMR (2006)

II. Assessment of nutritional status of students in class

1. Same as the previous project
2. Students can be instructed to record their height and weight in a table form.

III. Classification of locally available foods according to their nutrient content.

Model Form

Name of the Student :

Name of the School :

Place :

Date of Survey :

Based on Food Groups (ICMR) the available foods in the market can be recorded as per their nutrient content.

A. Based on Food Groups

1. Cereals
2. Pulses
3. Fruits and vegetables
4. Milk and meat
5. Sugar and oil

B. Based on nutrient content

1. Carbohydrate rich foods
2. Protein rich foods
3. Fat rich foods
4. Vitamin rich fodos
   - (i) Vitamin A
   - (ii) Vitamin E
   - (iii) Vitamin C
   - (iv) Vitamin B (B complex)
5. Minerals rich foods
   - (i) Iron
   - (ii) Calcium
   - (iii) Iodine

IV. Finding the reasons for spoilage of pickles

Different kinds of spoilage occur in pickles as follows :

1. Shrivelling : This occurs when vegetables like cucumber are placed directly in very strong solution of sugar or salt or vinegar. To avoid this weak solutions should be used first, then gradually increasing the concentration.

2. Bitter taste : This results from the use of strong vinegar and also by cooking with more spices.

3. Blackening : This is caused by iron, which enters through the brine from the equipment.

4. Dull and faded products : Pickles become dull and faded due to either insufficient curing or use of food material of inferior quality.

5. Softness and slipperiness : This occur due to inadequate covering with brine or owing to the use of a weak brine. Keeping pickle well below the surface of the brine, this type of spoilage can be eliminated.

6. Scum formation : When vegetables are placed in the brine for curing due to the growth of yeast, a white scum is formed. Addition of about one percent acetic acid helps to prevent the growth of wild yeast on the brine.

7. Cloudiness : When vegetables are placed in vinegar sometimes the vinegar becomes cloudy and turbid, thereby spoiling the appearance of the pack.

8. Blemishes in onion pickle : Blemishes occur due to some kind of fermentation in onion pickle due to vinegar, if the pickle is not dehydrated properly blemishes occur.

Table showing spoilage of common type of pickles.

Causes of spoilage	Lemon pickle	Mango pickle	Onion pickle
1. Shrivelling			
2. Bitter taste			
3. Blackening			
4. Dull and faded products			
5. Softness and slipperiness			
6. Scum formation			
7. Cloudiness			
8. Blemishes			

V. Identification of spoilage of food

Food spoilage can be defined as any decay or undesirable decomposition of constituents by excessive growth of micro organisms or by other physical and chemical, causes.

Foods are classified into three groups on the basis of extent of spoilage

1. **Stable or non perishable foods -** Sugar, flour, grains (unless handled carelessly they will not be spoiled)
2. **Semi-perishable foods -** Potatoes, onions, apples
3. **Perishable foods -** Meat, poultry, eggs, milk, fruits and vegetables

Major cause for food deterioration

A. Biological

1. Growth of bacteria, yeast, mould
2. Activity of enzymes
3. Insects, rodents and parasites

B. Chemical

1. Reaction with oxygen
2. Chemical reaction with food constituents
3. Light

C. Physical

1. Temperature
2. Physical stress or abuse

Table showing causes and remedial measures of food spoilage

S.No.	Food Items	Causes / Changes	Remedy
I.	**Cereals** Rice, wheat, Pulses and legumes	Insects, worms, moisture, stale odour	Drying to a safe moisture level Storing in proper container
II.	**Vegetables** Beans Tomatoes Brinjal Radish	White mould formation Watery soft rot Insect Discolouration - fungal attack	Proper storage
III	**Fruits** Apple Banana Grapes Lime, Orange	Change in colour Chemical reaction Oxidation Changes in acidic pH Green mould in citrus fruits Whitish or greyish cotton matter (mould)	Proper storage
IV	**Bread**	Fungal attack White mould - mucor mucedo Green mould - Pencillium Black - Aspergillus niger	Avoidance of warm and humid condition Increasing acidity of dough Thorough cooling of bread
V	**Milk and Milk products**	Bitter or acid taste Curdling of milk Change in pH value (acidity)	Proper storage
VI	**Meat**	Change in colour and firmness Bad smell due to bacteria and microbial attack, softening	Buying fresh and quality meat Cooking properly at high temperatures so that micro organisms are killed, Proper storage

VI. Conducting Survey on the effects of consumption of fast foods

Questionnaire Schedule

1. Name of the Interviewer :
2. Name of the Interviewee :
3. Address :

Name of the family members	Age	Sex	Education	Income

4. Do you have the habit of eating fast foods outside

   Yes ☐ No ☐

5. If yes, indicate whether you have visited the following outlets

   Hotel ☐ Fast food restaurant ☐

   Road side outlet ☐ Any other ☐

6. Frequency of visiting these outlets

   Daily ☐ Weekly twice ☐ Weekly once ☐

   Monthly once ☐ Occasionally ☐

7. Who accompany you to these outlets

   Family ☐ Friends ☐ Alone ☐

8. Indicate the amount of money spent/week :
9. Mention the type of fast foods consumed

   1. 2. 3. 4.

10. Indicate the source of money for fast foods

    Parents ☐ Friends ☐ Relatives ☐

11. Did you face any problem after consuming fast foods?

    Stomach ache ☐ Diarrhoea ☐ Allergy ☐

    Vomitting ☐ Others ☐

12. Indicate the advantages of consuming fast food :
13. Whether fast foods are served hygienically?

    Yes ☐ No ☐

14. Whether food is served hot :

Yes ☐ No ☐

15. Whether prepared earlier and displayed

Yes ☐ No ☐

16. Display of food

Kept open ☐ Kept inside containers ☐

Kept in the warmer ☐ Kept in closed containers ☐

17. Is the amount served is adequate for the money charged?

Yes ☐ No ☐

18. Have you put on weight after fast food consumption?

Yes ☐ No ☐